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Application No.: 10/502,468

REMARKS

In light of the above amendatory matter and remarks to follow, reconsideration and allowance of this application are respectfully requested.

Claims 1-4, 11-12, 18-19 and 25 have been amended. Claims 10, 17, 24, and 26-28 have been cancelled. Accordingly, claims 1-9, 11-16, 18-23 and 25 are presented for reconsideration.

Claim 1 was objected to because of an informality. Claim 1 as well as claims 2-4 have been amended to change "an display" to "a display." It is requested that the objection to claim 1 be withdrawn.

Claims 27 and 28 were rejected under 35 U.S.C. 112, first and second paragraphs. Claims 27 and 28 have been cancelled thus rendering moot these rejections.

Claims 1-8, 10-15, 17-22 and 24-26 were rejected under 35 U.S.C. 103(a) as being unpatentable over the publication "Evaluation of Artificial Reality: Chapter 1" (hereinafter "Artificial Reality publication"). As discussed below, it is submitted that these claims, as amended, are not obvious in light of this reference.

The Finality Status of the Office Action is Improper

Prior to discussing the merits of the rejection, it is respectfully submitted that the finality status of the office action is improper. In the final office action, the Examiner indicated that "Applicant's amendment necessitated the new ground(s) of rejection presented

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in this Office Action." (Office Action, page 12, 1st paragraph after "Conclusion" heading). It is submitted, however, that the applicant did not necessitate the above-identified new ground of rejection. That is, in the final office action under reply, claim 1 and various other claims were rejected under 35 U.S.C. 103(a) in view of the Artificial Reality publication. However, the prior office action dated August 24, 2005 did not reject claim 1 (and various other claims) under 35 U.S.C. 103(a) in view of this reference. Rather, the prior office action rejected these claims under 35 U.S.C. 102(b) as being anticipated by this reference. But claim 1 (and the other pending claims) were not amended in response to the prior office action; only arguments were presented. Thus, applicant's prior response filed November 28, 2005 did not necessitate the new grounds of rejection of claim 1 and the various other claims.

Accordingly, the finality status of the office action dated December 15, 2005 is improper and it is respectfully requested that the finality status be withdrawn.

The Rejection of the Claims in view of the Prior Art

Turning now to the rejection of claims 1-8, 10-15, 17-22 and 24-26 under 35 U.S.C. 103(a) as being unpatentable over the Artificial Reality publication, each of the independent claims 1-4, 11-12, 18-19 and 25 have been amended to include the features recited in now-cancelled claims 10, 17, 24 and 26. Namely, all of the independent claims now recite, in one form or another, the following:

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"the computer graphics having a lacking area for showing the observer a second actual object having a part which exists on the observer side than the actual object, and said nimbus generating device generating a nimbus image around a periphery of the lacking area."

In the office action under reply, the Examiner acknowledges that the Artificial Reality publication does not disclose the feature of "disclosing a second actual object." However, the examiner asserts the following:

"The error of the CG display position is such that the size of the displayed CG is increased larger than the actual robot [pg. 18, lines 7-15]. This error, i.e. nimbus, compensates for the possible movement of the robot so when the robot moves, so that there is no chance that the actual robot will be seen apart from the CG superimposed. Thus, if the robot were carrying an item, it would have been obvious to include a nimbus around the item for the same reason (claims 10, 17, 24, 26: wherein said nimbus generating device also generates a nimbus image around a periphery of the lacking area)." (Office Action, page 9, lines 11-18).

It is first submitted that it would not have been obvious to modify the Artificial Reality publication as proposed by the Examiner since it is not necessary to provide a "lacking area" in the computer graphics to show an item being carried by the "arm-type caregiving robot" described in the publication on page 20, lines 7-13 as shown in Figure 1.38 (such figure not being very clear in applicant's copy) since such an object would be disposed outside the area of the computer graphics. If it was contemplated in the publication to carry an object somewhere in the middle of the computer graphics, then it is firmly believed that the publication would have indicated the feature of providing a "lacking area" specifically for the purpose of displaying the object being carried at a location that otherwise is disposed within the computer graphic. The publication instead is silent with respect to this feature.

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The discussion in the publication in the "Results" section on page 23, lines 12-22 illustrates that a "virtual helper" was realized "to spiritually support the elderly." Hence, it is submitted that the publication illustrates a more simplistic robot than that contemplated by the Examiner, namely, the "carrying task" mentioned on page 20, line 8 does not illustrate that the item to be carried is disposed within the computer graphic but, rather, outside the periphery of the computer graphic. Hence, there would be no need to modify the teachings of the publication to provide for a "lacking area" within the computer graphics to enable the user to see the item being carried.

It is further submitted that one of ordinary skill in the art would not modify the teachings of the Artificial Reality publication to (1) generate a nimbus image around a periphery of the computer graphics; (2) provide for a lacking area within the computer graphics to allow the observer to see a second actual object; and (3) generate another nimbus image around the periphery of the lacking area. In the office action, the Examiner acknowledged that the Artificial Reality publication does not disclose these features. Initially, the Examiner indicated that it would have been obvious to generate a nimbus image around the periphery of the computer graphics. Applicant disagrees for reasons set forth in the prior response, such reasons being incorporated herein. In any event, even if arguably such would have been obvious, applicant further submits that it would not have been obvious to modify the reference to provide for a lacking area within the computer graphics. Still yet, applicant further disagrees with the examiner and submits that providing another nimbus

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image around the periphery of the lacking area would not have been obvious to one of ordinary skill in the art given the teachings of the Artificial Reality publication.

With respect to the third mentioned claimed feature of generating another nimbus around the periphery of the lacking area, there is no suggestion in the reference to do so simply since the reference does not teach providing a nimbus. Hence, one of ordinary skill in the art would, at best, provide a lacking area that allows the user to see the object being carried, but no nimbus would be provided around that lacking area. Given that several features of applicant's claimed invention are not disclosed in the Artificial Reality publication, it is submitted that the Examiner is improperly utilizing the present invention as a guide in modifying the cited prior art.

Notwithstanding the above-discussion, it is further submitted that if one of ordinary skill in the art were to modify the teachings of the Artificial Reality publication to provide for a lacking area to allow the user to see an item being carried by the robot, one would likely modify the reference as follows:

The attached drawing page shows a robot holding an object (e.g., a bar of chocolate) in figure B1. A human image computer graphic is shown in figure B2. One of ordinary skill in the art, using the teachings disclosed in the Artificial Reality publication, would then provide an enlarged human computer graphic as shown in figure B3. Then, the image seen by the observer is shown in figure B4. As can be seen, since the size of the lacking area is enlarged, the observer sees a part of the robot around the object. Moreover, since the size of

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the computer graphic is large in comparison to the size of the object shown in the lacking area, an unnatural image to the viewer is provided. Hence, one would be disinclined to provide for a lacking area using the teachings in the Artificial Reality publication. As to not enlarging the computer graphic to possibly solve this problem, not enlarging the computer graphic is in complete contradiction to the teachings of the Artificial Reality publication. Hence, given the teaching of the Artificial Reality publication, one would not find it obvious to modify the reference in the manners proposed by the Examiner.

In view of the foregoing, independent claims 1-4, 11-12, 18-19 and 25 are not obvious in view of the Artificial Reality publication. Accordingly, it is requested that the rejection of claims 1-4, 11-12, 18-19 and 25 under 35 U.S.C. 103(a) in view of the Artificial Reality publication be withdrawn.

Since claims 5-8, 13-15 and 20-22 depend from one or more of the independent claims, the foregoing discussion is equally applicable to claims 5-8, 13-15 and 20-22 and, thus, it is requested that the rejection of claims 5-8, 13-15 and 20-22 be withdrawn.

Claims 9, 16 and 23 were rejected under 35 U.S.C. 103(a) as being unpatentable over the Artificial Reality publication in view of Yuasa et al. (U.S. patent 6,184,888) (hereinafter "Yuasa"). Since claims 9, 16 and 23 depend from one or more of the aforementioned independent claims in the application, and since Yuasa does not disclose the aforementioned deficiencies of the Artificial Reality publication, the foregoing discussion with respect to the

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independent claims is equally applicable to claims 9, 16 and 23. Accordingly, it is requested that the rejection of claims 9, 16 and 23 under 35 U.S.C. 103(a) be withdrawn.

In view of the foregoing, reconsideration and allowance of this application are respectfully requested.

Respectfully submitted,



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